

Translation

PATENT COOPERATION TREATY

PCT/EP2003/010151



# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0000053948	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. PCT/EP2003/010151	International filing date (day/month/year) 12 September 2003 (12.09.2003)	Priority date (day/month/year) 24 September 2002 (24.09.2002)
International Patent Classification (IPC) or national classification and IPC C09B 67/46		
Applicant BASF AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

<input checked="" type="checkbox"/> Box No. I	Basis of the report
<input type="checkbox"/> Box No. II	Priority
<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/> Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/> Box No. VI	Certain documents cited
<input type="checkbox"/> Box No. VII	Certain defects in the international application
<input type="checkbox"/> Box No. VIII	Certain observations on the international application

Date of submission of the demand 24 February 2004 (24.02.2004)	Date of completion of this report 22 July 2004 (22.07.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2003/010151

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

- ☐ The international application as originally filed/furnished
- ☒ the description:
- pages \_\_\_\_\_ 1-14 \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ 1-10 \_\_\_\_\_ received by this Authority on \_\_\_\_\_ 03 June 2004 (03.06.2004)
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/EP 03/10151

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

### 2. Citations and explanations

- 1) The present application relates to solid pigment preparations that contain as essential constituents 60-90% of a pigment and 10-40% of an additive selected from the group of alcohol ether conversion products, together with a bisphenol.

The amendments consist in limiting the bisphenol to be used to compounds in which R<sup>1</sup> and R<sup>2</sup> in formula I are methyl groups. In the description as originally filed such compounds were disclosed as preferable alternatives (cf. page 7, lines 31-32).

- 2) Prior art:  
D1: EP-A-0 013 576  
D2: EP-A-1 103 173  
D3: WO 02/068504  
D4: EP-A-0 655 527  
D5: DE-A-27 30 223

### 3) Novelty

D1 describes pigment preparations in powder form containing disperse dyes (65-80%) and an addition product (I) (5-18%) (cf. D1, page 3, lines 25-33,

and page 4, lines 25-28). However, in contrast to constituent B in the present application, the addition products in D1 are products in which  $R^1/R^2$  represent at least a hydrogen atom.

D2 describes solid pigment preparations for dyeing seed grains comprising a pigment constituent and an additive, in which alkoxyated phenols may be used as the additive. However, alkoxyated bisphenols are not specifically mentioned.

D3 describes solid pigment preparations comprising a pigment and alkoxylation products prepared from epoxides and amines. In the present application such alkoxylation products prepared from amines are not used.

D4 relates to aqueous pigment preparations that may contain a pigment and an alkoxyated bisphenol in addition to water, wherein, as an initial preparation step, the colourant and the additive are pulverized together (cf. page 7, lines 51-56). However, in contrast to the subject matter of the application D4 does not specifically describe the preparation of alkoxyated bisphenols as per the present application in the ratio prescribed without water.

D5 also relates to aqueous pigment preparations that may contain a pigment and an alkoxyated bisphenol in addition to water. However, D5 does not clearly describe solid preparations that contain as essential constituents 60-90% of a pigment and 10-40% of an additive.

## 4) Inventive step

Proceeding from D1 or D2, the problem appears to consist in providing further alkoxylated phenols for solid pigment preparations. However, said further derivatives pertain to known derivatives with similar properties (cf. D4/D5); a person skilled in the art would therefore use these further derivatives as alternative surfactant additives, as in D1 or D2.

With respect to the embodiment as per claim 4, the properties specified for the pigment granules are routine requirements (cf. D2, page 7).

The uses as per claims 6-10 are typical uses for solid pigment preparations (cf. D3).

## 5) Further observations

The further derivatives as per claim 2 (phenylethyl-substituted bisphenol A, acidic sulphate /sulphonic acid esters, salts thereof) do not appear to be comprised by independent claim 1.

# VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS

## PCT

### INTERNATIONALER VORLÄUFIGER PRÜFUNGSBERICHT

(Artikel 36 und Regel 70 PCT)

REC'D 23 JUL 2004

WIPO

PCT

Aktenzeichen des Anmelders oder Anwalts 0000053948	<b>WEITERES VORGEHEN</b> siehe Mitteilung über die Übersendung des internationalen vorläufigen Prüfungsberichts (Formblatt PCT/PEA/416)	
Internationales Aktenzeichen PCT/EP 03/10151	Internationales Anmeldedatum (Tag/Monat/Jahr) 12.09.2003	Prioritätsdatum (Tag/Monat/Jahr) 24.09.2002
Internationale Patentklassifikation (IPK) oder nationale Klassifikation und IPK C09B67/46		
Anmelder BASF AKTIENGESELLSCHAFT et al.		

1. Dieser internationale vorläufige Prüfungsbericht wurde von der mit der internationalen vorläufigen Prüfung beauftragten Behörde erstellt und wird dem Anmelder gemäß Artikel 36 übermittelt.


2. Dieser BERICHT umfaßt insgesamt 5 Blätter einschließlich dieses Deckblatts.

- ☒ Außerdem liegen dem Bericht ANLAGEN bei; dabei handelt es sich um Blätter mit Beschreibungen, Ansprüchen und/oder Zeichnungen, die geändert wurden und diesem Bericht zugrunde liegen, und/oder Blätter mit vor dieser Behörde vorgenommenen Berichtigungen (siehe Regel 70.16 und Abschnitt 607 der Verwaltungsrichtlinien zum PCT).

Diese Anlagen umfassen insgesamt 2 Blätter.

3. Dieser Bericht enthält Angaben zu folgenden Punkten:

- I ☒ Grundlage des Bescheids
- II ☐ Priorität
- III ☐ Keine Erstellung eines Gutachtens über Neuheit, erfinderische Tätigkeit und gewerbliche Anwendbarkeit
- IV ☐ Mangelnde Einheitlichkeit der Erfindung
- V ☒ Begründete Feststellung nach Regel 66.2 a)ii) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung
- VI ☐ Bestimmte angeführte Unterlagen
- VII ☐ Bestimmte Mängel der internationalen Anmeldung
- VIII ☐ Bestimmte Bemerkungen zur internationalen Anmeldung

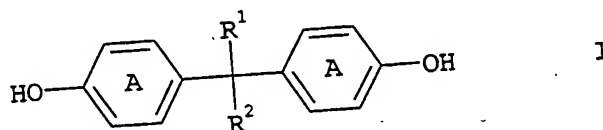
Datum der Einreichung des Antrags  24.02.2004	Datum der Fertigstellung dieses Berichts  22.07.2004
Name und Postanschrift der mit der internationalen Prüfung beauftragten Behörde   Europäisches Patentamt D-80298 München Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Bevollmächtigter Bediensteter  Steendijk, M Tel. +49 89 2399-8460



REPLACED BY  
ART 34 AMDT

We claim:

1. Solid pigment preparations comprising as essential constituents
  - (A) from 60 to 90% by weight of at least one pigment and
  - (B) from 10 to 40% by weight of at least one surface-active additive from the group of the reaction products of alkylene oxides with a bisphenol of the general formula I



- where the rings A may each be substituted by one or two substituents selected from the group consisting of C<sub>1</sub>-C<sub>8</sub>-alkyl, phenyl and phenyl-C<sub>1</sub>-C<sub>8</sub>-alkyl and R<sup>1</sup> and R<sup>2</sup> are independently hydrogen or C<sub>1</sub>-C<sub>8</sub>-alkyl.
2. Pigment preparations as claimed in claim 1, wherein component (B) is at least one additive from the group of the reaction products of ethylene oxide and/or propylene oxide with bisphenol A and phenylethyl-substituted bisphenol A, the acidic sulfuric and sulfonic esters of these alkylene oxide compounds and the salts of these esters.
3. Pigment preparations as claimed in claim 1 or 2, wherein component (B) is at least one nonionic surface-active additive based on reaction products of bisphenol A with from 4 to 150 mol of ethylene oxide/mol.
4. Pigment preparations as claimed in any of claims 1 to 3, in the form of granules having an average particle size from 50 to 5000  $\mu\text{m}$  and a BET surface area  $\leq 15 \text{ m}^2/\text{g}$ .
5. A process for producing pigment preparations as claimed in any of claims 1 to 4, which comprises wet-comminuting the pigment (A) in aqueous suspension in the presence of some or all of additive (B) and then drying the suspension, if necessary after the rest of additive (B) has been added.

6. A process for pigmenting macromolecular organic and inorganic materials, which comprises introducing the pigment preparations as claimed in any of claims 1 to 4 into these materials by stirring or shaking.

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7. A process as claimed in claim 6, for pigmenting coatings, paints, inks, including printing inks, and finish systems where the liquid phase comprises water, organic solvent or mixtures of water and organic solvents.

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8. A process for pigmenting macromolecular organic and inorganic materials using color-mixing systems, which comprises using pigment preparations as claimed in any of claims 1 to 4 as mixing components.

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9. A process for pigmenting plastics, which comprises incorporating pigment preparations as claimed in any of claims 1 to 4 into the plastics by extruding, rolling, kneading or milling.

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10. A process for pigmenting powder coatings, which comprises incorporating pigment preparations as claimed in any of claims 1 to 4 into the powder coatings by extruding, rolling, kneading or milling.

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